UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VII
901 NORTH 5TH STREET
KANSAS CITY, KANSAS 66101

DEC 11 2006

Mr. Edward Galbraith, Director
Water Pollution Control Program
Water Protection and Soil Conservation Division
Missouri Department of Natural Resources
P.O. Box 176
Jefferson City, Missouri 65102

Dear Mr. Galbraith:

RE: Permit Limits in Lieu of a TMDL for East Brush Creek (WBID 811) and Straight Fork (WBID 959)

This letter responds to two submissions from the Missouri Department of Natural Resources (MDNR). The first submission is dated August 21, 2006, and is regarding East Brush Creek. The second submission is dated October 13, 2006, and is regarding Straight Fork. Both submissions were listed as impaired on Missouri's 1998 §303(d) list, for Biochemical Oxygen Demand (BOD) and/or Volatile Suspended Solids (VSS). MDNR proposes to correct the impairments with National Pollutant Discharge Elimination System (NPDES) permit limits in lieu of Total Maximum Daily Loads (TMDLs). The following water body segments are proposed to be corrected through permit limits.

Water Body	WBID	Impairment	Source	Permit #	Year added to list
East Brush Creek	811	Biochemical Oxygen Demand (BOD) Volatile Suspended Solids (VSS)	California Wastewater Treatment Plant (WWTP)	MO-0023281	1998
Straight Fork	959	Volatile Suspended Solids (VSS)	Versailles Wastewater Treatment Plant (WWTP)	MO-0094927	1998

Waters require TMDLs when certain pollution control requirements are not stringent enough to implement water quality standards (WQS) for such waters. To exempt an impaired water from the TMDL process, the pollution control requirements cited in the regulation under 130.7(b)(i), (ii), and (iii) must be established and enforced by federal, state, or local laws or regulations, and be stringent enough that, when applied, the receiving water will meet WQS.

In regards to East Brush Creek and Straight Fork, Federal regulations at 40 CFR 130.7(b)(ii) provide that where [more stringent effluent limitations (including prohibitions) required by either state

or local authority preserved by section 510 of the Act, or Federal authority (law, regulation, or treaty)] are stringent enough to implement WQS, a TMDL is not required. The Environmental Protection Agency (EPA) has completed its review of these submissions, and other previously submitted information supporting these permits in lieu of TMDLs, and concurs that TMDLs are not required for these impaired water bodies because the impairments are being addressed through more stringent NPDES permit limits as per 40 CFR 130.7(b)(ii).

The California WWTP has been identified as the sole source for the VSS and BOD impairments on East Brush Creek as a result of surface water monitoring directly above and below the WWTP. The NPDES permit was issued on February 4, 2005, and revised August 4, 2006, for the California WWTP and includes a compliance schedule to commence by April 1, 2007. Final limits, which will achieve WQS for VSS and BOD, will be imposed through the August 4, 2006, permit with the conclusion of the compliance schedule by August 4, 2009. In review of the permit, the existing effluent limits have been reduced from 65/45 weekly/monthly average BOD to 26/13. The permit also includes the addition of permit limits for ammonia, total nitrogen, total phosphorus, oil & grease, fecal coliform, and total residual chlorine. The lagoon discharge to East Brush Creek will be eliminated and wastewater will be pumped to the existing south plant. Additionally, the permit requests instream monitoring of dissolved oxygen, temperature, pH, and ammonia, ensuring limits are appropriate. The permit also includes a reopener clause to allow for stricter limits if monitoring shows WQS violations.

The Versailles WWTP has been identified as the sole source of the VSS impairment, on Straight Fork, as a result of surface water monitoring directly above and below the WWTP. The NPDES permit issued on September 18, 2006, for the Versailles WWTP includes a compliance schedule to commence by April 30, 2007. Final limits, which will achieve WQS for VSS, will be imposed through the September 18, 2006, permit with the conclusion of the compliance schedule by August 1, 2011. In review of the permit, the existing effluent limits have been reduced from 45/30 weekly/monthly average TSS to 30/15. The permit also includes the addition of permit limits for ammonia, total recoverable zinc, total recoverable chromium III, total recoverable chromium VI, oil & grease, fecal coliform, and chloride. Additionally, the permit requests instream monitoring of dissolved oxygen, temperature, and pH, ensuring limits are appropriate. The permit also includes a reopener clause to allow for stricter limits if monitoring shows WQS violations.

If you have any questions or concerns in regards to this matter, please do not hesitate to contact Jack Generaux, TMDL Team Leader, at (913)551-7690, or Tabatha Adkins, TMDL Team, at (913)551-7128.

Sincerely,

William A. Spratlin

William A. Spratlin
Director
Water, Wetlands and Pesticides Division

cc: John Hoke
Missouri Department of Natural Resources

Phil Schroeder
Missouri Department of Natural Resources

STATE OF MISSOURI

DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION

MISSOURI STATE OPERATING PERMIT

In compliance with the Missouri Clean Water Law, (Chapter 644 R.S. Mo. as amended, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92-500, 92nd Congress) as amended,

Permit No.	MO-0023281
Owner:	City of California
Address:	902 E. Buchanan, California, MO 65018-1974
Continuing Authority:	City of California
Address:	902 E. Buchanan, California, MO 65018-1974
Facility Name:	California North Lagoon
Facility Address:	Route O, California, MO 65018
Legal Description:	Sections 16 & 21, T45N, R15W, Moniteau County
Latitude/Longitude:	+3839163/-09234177
Receiving Stream:	Tributary of East Brush Creek (U)
First Classified Stream and ID:	East Brush Creek (C) (00811)
USGS Basin & Sub-watershed No.:	10300102 - 160002

is authorized to discharge from the facility described herein, in accordance with the effluent limitations and monitoring requirements as set forth herein:

FACILITY DESCRIPTION

Outfall #001 - POTW - SIC #4952
Three cell lagoon/sludge retained in lagoon.
Design population equivalent is 8,215.
Design flow is 821,500 gallons per day, actual flow is 360,000 gallons per day.
Design sludge production is 123 dry tons/year, actual sludge production is 54 dry tons/year.

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This permit authorizes only wastewater discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas. This permit may be appealed in accordance with Section 644.051.6 of the Law.

February 4, 2005
Effective Date

August 4, 2006
Revised Date

February 3, 2010
Expiration Date

Doyle Childers, Director, Department of Natural Resources
Executive Secretary, Clean Water Commission

Edward Galbraith, Director of Staff, Clean Water Commission

Outfall #S1 – Instream Monitoring
Approximately ¼ mile downstream from outfall 001 in East Brush Creek.

Legal Description:	NE ¼, Sec. 16, T45N, R15W, Moniteau County
Latitude/Longitude:	+3839254/-09234111
Receiving Stream:	East Brush Creek (C)
First Classified Stream and ID:	East Brush Creek (C) (00811)
USGS Basin & Sub-watershed No.:	10300102 - 160002

A. INTERIM EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The interim effluent limitations shall become effective upon issuance and remain in effect until August 4, 2009. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	INTERIM EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfall #001						
Flow	MGD	*		*	once/week	24 hr. estimate
Biochemical Oxygen Demand$_5$**	mg/L		65	45	once/week	grab
Total Suspended Solids**	mg/L		120	80	once/week	grab
pH – Units	SU	***		***	once/week	grab
Ammonia as N	mg/L	*		*	once/week	grab
Oil & Grease	mg/L	*		*	once/month	grab
Total Nitrogen	mg/L	*		*	once/week	grab
Temperature	°C	*		*	once/week	grab
Total Phosphorous	mg/L	*		*	once/week	grab

MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE August 28, 2006 . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

Outfall #S1						
Dissolved Oxygen	mg/L	*			once/month	grab

MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE August 28, 2006 .

B. STANDARD CONDITIONS

IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED Parts I, II, & III STANDARD CONDITIONS DATED October 1, 1980 and August 15, 1994, AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

* Monitoring requirement only.
** This facility is required to meet a removal efficiency of 65% or more.
*** pH is measured in pH units and is not to be averaged. The pH is to be maintained above 6.0 pH units.

A. FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective August 4, 2009 and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfall #001						
Flow	MGD	*		*	once/week	24 hr total
Biochemical Oxygen Demand$_5$**	mg/L		26	13	once/week	24 hr comp.
Total Suspended Solids**	mg/L		26	13	once/week	24 hr comp.
pH – Units	SU	***		***	once/week	grab
Ammonia as N						
(May 1 – Oct 31)	mg/L	3.7		1.5	once/week	grab
(Nov 1 – April 30)	mg/L	7.5		3.1	once/week	grab
Oil & Grease	mg/L	15		10	once/month	grab
Total Nitrogen	mg/L	8.1		4.0	once/week	grab
Temperature	°C	*		*	once/week	grab
Total Phosphorous	mg/L	0.81		0.40	once/week	grab
Fecal Coliform	#/100ml	1000		400	once/week	grab
Total Residual Chlorine	mg/L	0.019		0.010	once/week	grab

MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE August 28, 2009. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

Whole Effluent Toxicity (WET) Test	% Survival	See Special Conditions	once/year	24 hr. composite

MONITORING REPORTS SHALL BE SUBMITTED ANNUALLY; THE FIRST REPORT IS DUE August 28, 2009.

Outfall #S1						
Dissolved Oxygen	mg/L	*			once/month	grab

MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE August 28, 2009.

B. STANDARD CONDITIONS

IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED Parts I, II, & III STANDARD CONDITIONS DATED October 1, 1980 and August 15, 1994, AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

* Monitoring requirement only.

** This facility is required to meet a removal efficiency of 85% or more.

*** pH is measured in pH units and is not to be averaged. The pH is to be maintained between 6.0 and 9.0 pH units.

C. SPECIAL CONDITIONS

1. This permit may be reopened and modified, or alternatively revoked and reissued, to:
   (a) Comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a) (2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:
      (1) contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
      (2) controls any pollutant not limited in the permit.
   (b) Incorporate new or modified effluent limitations or other conditions, if the result of a waste load allocation study, toxicity test or other information indicates changes are necessary to assure compliance with Missouri's Water Quality Standards.
   (c) Incorporate new or modified effluent limitations or other conditions if, as the result of a watershed analysis, a Total Maximum Daily Load (TMDL) limitation is developed for the receiving waters which are currently included in Missouri's list of waters of the state not fully achieving the state's water quality standards, also called the 303(d) list.

   The permit as modified or reissued under this paragraph shall also contain any other requirements of the Clean Water Act then applicable.

2. All outfalls must be clearly marked in the field.

3. Changes in Discharges of Toxic Substances

   The permittee shall notify the Director as soon as it knows or has reason to believe:
   (a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
      (1) One hundred micrograms per liter (100 µg/L);
      (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,5 dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
      (3) Five (5) times the maximum concentration value reported for the pollutant in the permit application;
      (4) The level established in Part A of the permit by the Director.
   (b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant, which was not reported in the permit application.

5. Report as no-discharge when a discharge does not occur during the report period.

6. Water Quality Standards
   (a) Discharges to waters of the state shall not cause a violation of water quality standards rule under 10 CSR 20-7.031, including both specific and general criteria.
   (b) General Criteria. The following general water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:
      (1) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;
      (2) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
      (3) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
      (4) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;
      (5) There shall be no significant human health hazard from incidental contact with the water;
      (6) There shall be no acute toxicity to livestock or wildlife watering;
      (7) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
      (8) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.

C. SPECIAL CONDITIONS (continued)

7. Sludge and Biosolids Use For Domestic Wastewater Treatment Facilities
   (a) Permittee shall comply with the pollutant limitations, monitoring, reporting, and other requirements in accordance with the attached permit Standard Conditions.
   (b) If sludge is not removed by a contract hauler, permittee is authorized to land apply biosolids. Permit Standard Conditions, Part III shall apply to the land application of biosolids. Permittee shall notify the department at least 180 days prior to the planned removal of biosolids. The department may require submittal of a biosolids management plan for department review and approval as determined appropriate on a case-by-case basis.

8. Whole Effluent Toxicity (WET) tests shall be conducted as follows:

SUMMARY OF WET TESTING FOR THIS PERMIT				
OUTFALL	A.E.C. %	FREQUENCY	SAMPLE TYPE	MONTH
001	100	Once/year	24 hr. composite	August

   (a) Test Schedule and Follow-Up Requirements
      (1) Perform a SINGLE-dilution test in the months and at the frequency specified above. For tests which are successfully passed, submit test results USING THE DEPARTMENT'S WET TEST REPORT FORM #MO-780-1899 along with complete copies of the test reports as received from the laboratory, including copies of chain-of-custody forms within 30 calendar days of availability to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102. If the effluent passes the test, do not repeat the test until the next test period.
         (a) For discharges of stormwater, samples shall be collected within three hours from when discharge first occurs.
         (b) Samples submitted for analysis of stormwater discharges shall be collected as a grab.
         (c) For discharges of non-stormwater, samples shall be collected only when precipitation has not occurred for a period of forty-eight hours prior to sample collection. In no event shall sample collection occur simultaneously with the occurrence of precipitation excepting for stormwater samples.
         (d) A twenty-four hour composite sample shall be submitted for analysis of non-stormwater discharges.
         (e) Upstream receiving water samples, where required, shall be collected upstream from any influence of the effluent where downstream flow is clearly evident.
         (f) Samples submitted for analysis of upstream receiving water may be collected as either a grab or twenty-four-hour composite as appropriate to the nature of the discharge.
         (g) Chemical and physical analysis of the upstream control and effluent sample shall occur immediately upon being received by the laboratory, prior to any manipulation of the effluent sample beyond preservation methods consistent with federal guidelines for WET testing that are required to stabilize the sample during shipping.
         (h) Any and all chemical or physical analysis of the effluent sample performed in conjunction with the WET test shall be performed at the 100% Effluent concentration in addition to analyses performed upon any other effluent concentration.
         (i) All chemical analyses included in the Missouri Department of Natural Resources WET test report form #MO-780-1899 shall be performed and results shall be recorded in the appropriate field of the report form.
         (j) Where flow-weighted composite sample is required for analysis, the samples shall be composited at the laboratory where the test is to be performed.
         (k) Where in stream testing is required downstream from the discharge, sample collection shall occur immediately below the established Zone of Initial Dilution in conjunction with or immediately following a release or discharge.
         (l) Samples submitted for analysis of downstream receiving water may be collected as either a grab or twenty-four-hour composite as appropriate to the nature of the discharge.
         (m) All instream samples, including downstream samples, shall be tested for toxicity at the 100% concentration in addition to any other assigned AEC for in-stream samples.

C. SPECIAL CONDITIONS (continued)

8. Whole Effluent Toxicity tests (continued):

(2) All failing test results along with complete copies of the test reports as received from the laboratory, INCLUDING THOSE TESTS CONDUCTED UNDER CONDITION (3) BELOW, shall be reported to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102 within 14 calendar days of the availability of the results.

(3) If the effluent fails the test, a multiple dilution test shall be performed within 30 calendar days and biweekly thereafter, until one of the following conditions are met:

(a) THREE CONSECUTIVE MULTIPLE-DILUTION TESTS PASS. No further tests need to be performed until next regularly scheduled test period.

(b) A TOTAL OF THREE MULTIPLE-DILUTION TESTS FAIL.

(4) Failure of at least two multiple-dilution tests during any period of accelerated monitoring violates the permit narrative requirement for aquatic life protection.

(5) The permittee shall submit a CONCISE summary of all test results for the test series to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102 within 14 calendar days of the third failed test.

(6) Additionally, the following shall apply upon failure of the third MULTIPLE DILUTION test: A toxicity identification evaluation (TIE) or toxicity reduction evaluation (TRE) is automatically triggered. The permittee shall contact THE WATER PROTECTION PROGRAM within 14 calendar days from availability of the test results to ascertain as to whether a TIE or TRE is appropriate. The permittee shall submit a plan for conducting a TIE or TRE to the WATER PROTECTION PROGRAM within 60 calendar days of the date of DNR's direction to perform either a TIE or TRE. This plan must be approved by DNR before the TIE or TRE is begun. A schedule for completing the TIE or TRE shall be established in the plan approval.

(7) Upon DNR's approval, the TIE/TRE schedule may be modified if toxicity is intermittent during the TIE/TRE investigations. A revised WET test schedule may be established by DNR for this period.

(8) If a previously completed TIE has clearly identified the cause of toxicity, additional TIEs will not be required as long as effluent characteristics remain essentially unchanged and the permittee is proceeding according to a DNR approved schedule to complete a TRE and reduce toxicity. Regularly scheduled WET testing as required in the permit, without the follow-up requirements, will be required during this period.

(9) When WET test sampling is required to run over one DMR period, each DMR report shall contain a copy of the Department's WET test report form that was generated during the reporting period.

(10) Submit a concise summary in tabular format of all test results with the annual report.

(b) PASS/FAIL procedure and effluent limitations:

(1) To pass a single-dilution test, mortality observed in the AEC test concentration shall not be significantly different (at the 95% confidence level; $p = 0.05$) than that observed in the upstream receiving-water control sample. Where upstream receiving water is not available mortality observed in the AEC test concentration shall not be significantly different (at the 95% confidence level; $p = 0.05$) than that observed in the laboratory control. The appropriate statistical tests of significance shall be consistent with the most current edition of METHODS FOR MEASURING THE ACUTE TOXICITY OF EFFLUENTS AND RECEIVING WATERS TO FRESHWATER AND MARINE ORGANISMS or other Federal guidelines as appropriate or required.

(2) To pass a multiple-dilution test:

(a) For facilities with a computed percent effluent at the edge of the zone of initial dilution, Allowable Effluent Concentration (AEC), OF 30% OR LESS THE AEC must be less than three-tenths (0.3) of the LC_{50} concentration for the most sensitive of the test organisms; **OR,**

(b) For facilities with an AEC greater than 30% the LC50 concentration must be greater than 100%; **AND,**

(c) all effluent concentrations equal to or less than the AEC must be nontoxic. Mortality observed in all effluent concentrations equal to or less than the AEC shall not be significantly different (at the 95% confidence level; $p = 0.05$) than that observed in the upstream receiving-water control sample. Where upstream receiving water is not available mortality observed in the AEC test concentration shall not be significantly different (at the 95% confidence level; $p = 0.05$) than that observed in the laboratory control. The appropriate statistical tests of significance shall be consistent with the most current edition of METHODS FOR MEASURING THE ACUTE TOXICITY OF EFFLUENTS AND RECEIVING WATERS TO FRESHWATER AND MARINE ORGANISMS or other federal guidelines as appropriate or required. Failure of one multiple-dilution test may be considered an effluent limit violation.

C. SPECIAL CONDITIONS (continued)

8. Whole Effluent Toxicity tests (continued):

(c) Test Conditions
(1) Test Type: Acute Static non-renewal
(2) Test species: Ceriodaphnia dubia and Pimephales promelas (fathead minnow). Organisms used in WET testing shall come from cultures reared for the purpose of conducting toxicity tests and cultured in a manner consistent with the most current USEPA guidelines. All test animals shall be cultured as described in the most current edition of METHODS FOR MEASURING THE ACUTE TOXICITY OF EFFLUENTS AND RECEIVING WATERS TO FRESHWATER AND MARINE ORGANISMS.
(3) Test period: 48 hours at the "Acceptable Effluent Concentration" (AEC) specified above.
(4) When dilutions are required, upstream receiving stream water shall be used as dilution water. If upstream water is unavailable or if mortality in the upstream water exceeds 10%, "reconstituted" water will be used as dilution water. Procedures for generating reconstituted water will be supplied by the MDNR upon request.
(5) Single-dilution tests will be run with:
(a) Effluent at the AEC concentration;
(b) 100% receiving-stream water (if available), collected upstream of the outfall at a point beyond any influence of the effluent; and
(c) reconstituted water.
(6) Multiple-dilution tests will be run with:
(a) 100%, 50%, 25%, 12.5%, and 6.25% effluent, unless the AEC is less than 25% effluent, in which case dilutions will be 4 times the AEC, two times the AEC, AEC, 1/2 AEC and 1/4 AEC;
(b) 100% receiving-stream water (if available), collected upstream of the outfall at a point beyond any influence of the effluent; and
(c) reconstituted water.
(7) If reconstituted-water control mortality for a test species exceeds 10%, the entire test will be rerun.
(8) If upstream control mortality exceeds 10%, the entire test will be rerun using reconstituted water as the dilutant.

D. SCHEDULE OF COMPLIANCE

1. Permittee shall submit a revised engineering report for upgrades necessary to meet the final effluent limitations of this permit by April 1, 2007.

2. Permittee shall submit plans, specifications and a complete application for construction permit by January 1, 2008.

3. Permittee shall complete construction and submit Application Form B2 for Operating Permit modification, along with the consulting engineer's Certification of Work Completed by August 1, 2009.

E. RECEIVING WATER MONITORING CONDITIONS

1. Downstream samples should be taken within 10 yards of the established monitoring point ¼ downstream from outfall 001. In the event that a safe, accessible location is not present at this location, a suitable location can be negotiated with the department. Samples should be taken at least four feet from the bank or from the middle of the stream (whichever is less) and 6-inches below the surface. The upstream receiving water sample should be collected at a point upstream from any influence of the effluent, where the water is visibly flowing down stream.

2. When conducting in-stream monitoring, the permittee shall record observations that include: the time of day, weather conditions, unusual stream/lake characteristics (e.g., septic conditions, algae growth, etc.), the stream segment (e.g., riffle, pool or run) or the lake depth from where the sample was collected. These observations shall be submitted with the sample results.

3. Samples shall not be collected from areas with especially turbulent flow, still water or from the stream bank, unless these conditions are representative of the stream reach or no other areas are available for sample collection. Sampling should not be made when significant precipitation has occurred recently. The sampling event should be terminated and rescheduled if any of the following conditions occur:
   - If turbidity in the stream increases notably; or
   - If rainfall over the past two weeks exceeds 2.5 inches or exceeds 1 inch in the last 24 hours

4. Always use the correct sampling technique and handling procedure specified for the parameter of interest. Please refer to the latest edition of Standard Methods for the Examination of Water and Wastewater for further discussion of proper sampling techniques. All analyses must be conducted in accordance with an approved EPA method. Meters shall be calibrated immediately (within 1 hour) prior to the sampling event.

5. To obtain accurate measurements, D.O., temperature and pH analyses should be performed on-site in the receiving stream where possible. However, due to high flow conditions, access, etc., it may be necessary to collect a sample in a bucket or other container. When this is necessary, care must be taken not to aerate the sample upon collection. If for any reason samples must be collected from an alternate site from the one listed in the permit, the permittee shall report the location with the sample results.

6. Dissolved oxygen measurements are to be taken during the period from one hour prior to sunrise to one and one-half hour after sunrise.

7. Please contact the department if you need additional instructions or assistance.

SUMMARY OF TEST METHODOLOGY FOR WHOLE-EFFLUENT TOXICITY TESTS

Whole-effluent-toxicity test required in NPDES permits shall use the following test conditions when performing single or multiple dilution methods. Any future changes in methodology will be supplied to the permittee by the Missouri Department of Natural Resources (MDNR). Unless more stringent methods are specified by the DNR, the procedures shall be consistent with the most current edition of Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms,

Test conditions for Ceriodaphnia dubia:

Test duration:	48 h
Temperature:	25 ± 1°C Temperatures shall not deviate by more than 3°C during the test.
Light Quality:	Ambient laboratory illumination
Photoperiod:	16 h light, 8 h dark
Size of test vessel:	30 mL (minimum)
Volume of test solution:	15 mL (minimum)
Age of test organisms:	<24 h old
No. of animals/test vessel:	5
No. of replicates/concentration:	4
No. of organisms/concentration:	20 (minimum)
Feeding regime:	None (feed prior to test)
Aeration:	None
Dilution water:	Upstream receiving water; if no upstream flow, synthetic water modified to reflect effluent hardness.
Endpoint:	Pass/Fail (Statistically significant Mortality when compared to upstream receiving water control or synthetic control if upstream water was not available at $p \leq 0.05$)
Test acceptability criterion:	90% or greater survival in controls

Test conditions for (Pimephales promelas):

Test duration:	48 h
Temperature:	25 ± 1°C Temperatures shall not deviate by more than 3°C during the test.
Light Quality:	Ambient laboratory illumination
Photoperiod:	16 h light/ 8 h dark
Size of test vessel:	250 mL (minimum)
Volume of test solution:	200 mL (minimum)
Age of test organisms:	1-14 days (all same age)
No. of animals/test vessel:	10
No. of replicates/concentration:	4 (minimum) single dilution method 2 (minimum) multiple dilution method
No. of organisms/concentration:	40 (minimum) single dilution method 20 (minimum) multiple dilution method
Feeding regime:	None (feed prior to test)
Aeration:	None, unless DO concentration falls below 4.0 mg/L; rate should not exceed 100 bubbles/min.
Dilution water:	Upstream receiving water; if no upstream flow, synthetic water modified to reflect effluent hardness.
Endpoint:	Pass/Fail (Statistically significant Mortality when compared to upstream receiving water control or synthetic control if upstream water was not available at $p \leq 0.05$)
Test Acceptability criterion:	90% or greater survival in controls